2014 Water Quality Standards Footnotes

Summary of Supplemental Public Comments and Board Responses

(Note: In October, 2014, the previously adopted water quality standards were again put on public notice and an additional review period was undertaken in order to consider the addition of two footnotes clarifying the definitions of *de minimis* and measurable degradation, respectively. Following is a summary of public comments and the department's responses.

Comment 1: *The de minimis provision should be eliminated. The goal of the Clean Water Act is to eliminate discharges. The de minimis provision allows new discharges without an antidegradation review.*

Response: The *de minimis* provision allows very small amounts of degradation to be authorized without an economic and social necessity determination in some, but not all situations. For habitat alterations, an impact can only get to *de minimis* status by a combination of avoidance, minimization, and in-system mitigation (within the same 12 digit HUC if at all possible).

The regulation prohibits new or expanded domestic wastewater dischargers from being considered *de minimis*. For other types of discharges and water withdrawals, alterations can only be considered *de minimis* if they consume less than 5 percent of the assimilative capacity or 7Q10 flow, respectively. In waters with unavailable parameters, even a *de minimis* amount of degradation by that same parameter is prohibited, if due to a new or expanded discharge or withdrawal.

New or expanded discharges, or water withdrawals, are prohibited in Outstanding National Resource Waters (ONRWs) unless the effect is unmeasurable. A *de minimis* amount of degradation due to these activities would be measurable and therefore prohibited.

Additionally, there is a cumulative cap on the amount of degradation that can be allowed under the *de minimis* provision.

This approach to regulating very small amounts of degradation has been endorsed by EPA and previously approved. Additionally, the concept has been upheld in court cases.

Finally, the commenter may not be aware what a powerful tool the *de minimis* provision is in convincing applicants to minimize the amount of degradation they request. If they had to go through the economic and social necessity

determination process for any amount of degradation, there would be no incentive for them to request and strive for a smaller amount.

Comment 2: *Both footnotes refer to a section of the Water Quality Control Act [TCA § 69-3-108] dealing with permitting, not the antidegradation policy. Why?*

Response: While Tennessee Code Annotated § 69-3-108 does not specifically reference "de minimis degradation" or "measurable degradation" it is particularly relevant to these notes. The specific portion of T.C.A. § 69-3-108 that we had in mind states:

> (g) The commissioner may grant permits authorizing the discharges or activities described in subsection (b), including, but not limited to, land application of wastewater, but in granting such permits shall impose such conditions, including effluent standards and conditions and terms of periodic review, as are necessary to accomplish the purposes of this part, and as are not inconsistent with the regulations promulgated by the board. **Under no circumstances shall the commissioner issue a permit for an activity that would cause a condition of pollution either by itself or in combination with others. In addition the permits shall include: (1) The most stringent effluent limitations and schedules of compliance, either promulgated by the board, required to implement any applicable water quality standards, necessary to comply with an areawide waste treatment plan, or necessary to comply with other state or federal laws or regulations;** (emphasis added)

Comment 3: *Why is it necessary to give special consideration for bioaccumulative materials? Aren't their very low criteria established to provide the appropriate protection level? In fact, the Department made this exact point in previous responses to comments.*

Response: The commenter is correct that the agency previously took the position that the potential harm of bioaccumulative substances was reflected in their criteria. But after our rules were promulgated in May 2013, a judge in a case in Idaho, *Greater Yellowstone Coalition* v. *EPA*, ruled that EPA should not approve state *de minimis* regulations if they automatically authorize degradation without the possibility of additional consideration of the effects of bioaccumulative substances. Since our definition of *de minimis* was similar to Idaho's in that regard, EPA informed us that they could not approve our provision and be consistent with the judge's ruling.

Since we agree in principle that a bioaccumulative substance may pose a risk and have an effect that is not *de minimis*, even if the amount of degradation is

less than 5 percent of the assimilative capacity, we have proposed the footnote to establish this additional review process.

Comment 4: *What parameters are considered bioaccumulative by the Department?*

Response: Bioaccumulative parameters are indicated with the letter b in the numeric criteria tables for protection of fish and aquatic life, and recreation. (Rule 0400-40-03-.03(3)(g) and Rule 0400-40-03-.03(4)(j), respectively.)

Our identification of bioaccumulative parameters is consistent with EPA's "Parameters of Bioaccumulative Concern" established during the Great Lakes Initiative.

Comment 5: *What does the Department mean by "special consideration?"*

Response: For discharges and water withdrawals, for every parameter except those formally identified as bioaccumulative, *de minimis* status is automatic if the degradation represents less than 5 percent of the assimilative capacity or 7Q10 flow. However, in the case of bioaccumulative substances, staff will do an additional review of both the parameter and nature of the receiving water to insure that the impact of that parameter is truly *de minimis* in effect, even if technically less that 5 percent of the assimilative capacity.

For example, if an applicant proposes to discharge a very small amount of a bioaccumulative substance to a stream, we would check fish tissue or sediment data to insure that there is no evidence that even a small amount of additional discharge might trigger an unforeseen problem.

Comment 6: *The footnote regarding bioaccumulative substances might unfairly restrict an applicant from discharging very small amounts of such parameters.*

Response: The purpose of the footnote is to clarify how an alteration that is *de minimis* will be identified. If a bioaccumulative parameter in an application is judged to not be *de minimis* in effect, it could still be authorized under the social and economic necessity determination procedures.

As stated previously, to not make this change in light of the Idaho case would invite EPA disapproval of our *de minimis* provision in its entirety.

Comment 7: *Neither the current definition of de minimis nor the footnote provide any additional protections where waters have species with federal protection status or designation as Scenic Rivers.*

Response: The presence of listed species or a Scenic River designation automatically makes a waterbody an Exceptional Tennessee Water. Water quality impacts to listed species would be considered impairment, which according to the Act, we cannot authorize in any situation. As we stated in a previous response, we cannot think of a better way to protect water resources and listed species than by providing a strong incentive for applicants to minimize the amount of degradation they wish to have authorized.

Waterbodies with special status can be proposed for promulgation by the Board as Outstanding National Resource Waters (ONRWs). Once designated as an ORNW, new or expanded discharges are prohibited unless the effect is neither "measurable" nor "discernible."

Comment 8: *TDEC automatically issues any permit that is de minimis.*

Response: That is not correct. As stated previously, new or expanded dischargers - even if the effect is *de minimis* - are prohibited in ONRWs, or waters with unavailable parameters (if the alteration is the same parameter). Also, if the cumulative cap has been exceeded, no additional significant amounts of degradation can be allowed without an economic and social necessity determination.

Comment 9: *The de minimis provision allows the department to avoid public participation.*

Response: The public can review, comment on, and ultimately challenge any permit, including those in which the amount of degradation has been identified as *de minimis* in effect.

Comment 10: *There is nothing to limit a permittee to one application of the de minimis provision.*

Response: If the commenter means in a different or subsequent permit, **t**he commenter is correct. If an applicant had more than one discharge point, a *de minimis* amount of degradation could be authorized at each, provided the receiving water is available for the parameters in question. Additionally, in the next permit cycle, an applicant could again request a *de minimis* amount of degradation. However, as soon as the 10 percent cumulative cap for the

waterbody segment has been reached, any additional significant amounts of degradation would have to have a social and economic necessity determination.

Comment 11: *The de minimis footnote is silent regarding the cumulative cap of 10 percent.*

Response: The footnote doesn't apply to the cap. In order for degradation to be *de minimis*, the discharger must consume less than 5 percent of the assimilative capacity. The cumulative cap is simply an amount of total degradation from more than one application of *de minimis* that cannot be exceeded by any additional significant degradation. Degradation above the cumulative cap must be justified as necessary for social and economic development.

Comment 12: *If the Board wishes to retain the de minimis provision, the proposed footnote should be withdrawn and the definition rewritten. (Suggested text provided.)*

Response: Our intention was to clarify the definition rather than rewrite it. For that reason, we thought that a footnote was a better approach at this time.

Comment 13: *Recent permits have been written which have misused the de minimis concept.*

Response: This is a permitting comment rather than one related to the proposed rulemaking for the addition of two footnotes. As stated previously, there is an established process for reviewing, commenting upon, and contesting individual permits.

Comment 14: *The concept of "measurable" degradation should be deleted from the regulation. This provision creates an expanded set of exceptions from the Antidegradation Policy.*

Response: That was not our intention and we do not think it is the effect. In fact, since the rule previously allowed a *de minimis* amount of degradation in all waters, no matter the antidegradation status, we believe this previous loophole has been closed by the measurable provision.

The alternative is to say that the addition of even a molecule of a pollutant requires an antidegradation review. If an effect of degradation cannot be measured with the most sensitive instruments or laboratory methods, how can it be demonstrated to exist?

Comment 15: *If kept, the concept of "measurable" should also be applied to habitat alterations.*

Response: We think the concept of measurable degradation works with discharges and water withdrawals, but not well with habitat alterations. For example, there are numerous habitat alterations that can be done under general permit. However, while *de minimis* in effect, these alterations would be measurable. For example, minor private driveway crossings can normally be done under general permit, but each would represent a measurable alteration of the habitat in a stream.

We think that the application of the antidegradation policy in regard to habitat alteration works best with the familiar concepts of protection of resource values, avoidance and minimization of impacts, and various types of mitigation where impacts are unavoidable.

Comment 16: *The proposed footnote for the measurable definition currently uses the phrase "ensure that no degradation will result" in establishing the goal of the provision. It should say instead "ensure that no de minimis degradation or no degradation will occur, as applicable."*

Response: We understand the commenter's point that in some situations, a *de minimis* amount of degradation can be authorized without triggering further antidegradation review. However, the definition and footnote in question identify how it will be established that an effect cannot be measured and in most cases, a *de minimis* amount for degradation can be measured.

Comment 17: *If the Board wishes to retain the "measurable" concept, the definition of measurable should be rewritten so that the provision applies at the "end of pipe."*

Response: Water quality standards apply to streams, not discharge pipes. Rule 0400-40-03-.05 (1) states "The effect of treated sewage or waste discharge on the receiving waters shall be considered beyond the mixing zone…" (Note: not every stream or discharge has a mixing zone.)

Of course, in streams with a low flow basis of zero, the effect of this provision would apply at the end of pipe, since there would not be available flow for dilution.

Comment 18: *The Department should not allow mixing zones.*

Response: We understand that the mixing zone policy is referenced in one of the footnotes, but a comment to eliminate an EPA endorsed and authorized provision goes well beyond the proposed footnotes and was established in a previous rulemaking. The commenter should refer to our response at that time. As we said in a previous comment, not every discharge is allowed a mixing zone.

Comment 19: *Permitting staff do not understand the measurable provision.*

Response: We think the commenter has overstated this issue, but to the extent it may be true, it speaks to the need for additional training, not a change in the regulation.

Comment 20: *Establishing the "measurable" provision will increase the number of impaired segments in Tennessee.*

Response: We do not understand this comment. Establishing that the condition of pollution has been created requires that the effect be measurable. Only effects that cannot be measured fall under this provision.

Comment 21: *The "measurable" footnote references mathematical models and ecological indices. These should be specified in the rule so that the public could comment on them.*

Response: Since models and indices are dependent on the parameter in question – and there are a multitude of parameters – it would not be practical to name all of them. Additionally, naming specific models or indices in the regulation might lead to a legal argument that we are limited to the ones named.

Comment 22: *In establishing the amount of degradation that has or is likely to occur, the Department should not use biological indices. These scores can be affected by other background pollutants or a lack of habitat.*

Response: We understand this comment, but consider biological indices to provide one of our most sensitive measures to determine whether or not degradation has occurred. In fact, our criteria for both biological integrity and habitat are established on the basis of condition indices.

An antidegradation process that disregards biological data would insure federal disapproval.

Comment 23: *The Department should go back to the old definition of "unavailable."*

Response: This comment is unrelated to the proposed footnotes and goes back to a previous rulemaking. The commenter should refer to our response at that time.

Comment 24: *Habitat alterations should not be able to achieve de minimis status by mitigation.*

Response: This comment is unrelated to the proposed footnotes and goes back to a previous rulemaking. The commenter should refer to our response at that time.

Comment 25: *The parameter by parameter approach used by the Department in the application of the antidegradation policy in permitting ignores the combined effects of pollutants.*

Response: This comment is unrelated to the proposed footnotes and goes back to a previous rulemaking. The commenter should refer to our response at that time.

However, the commenter should be aware that EPA adds an "uncertainty factor" to its national criteria to help account for synergistic effects. Additionally, some permits have "whole effluent toxic test" requirements that must be met.

Comment 26: *The narrative criteria used by the Department complicate and confound the application of the antidegradation policy.*

Response: It is difficult to respond to this comment without specifics. Concerns about the application of the antidegradation policy in regulatory decisions can be raised as part of the permit review process. Many of our narrative criteria have regionally-derived numeric translators and all have been approved by EPA.